THE WALKING BUG

User Manual

The Walking Bug - 2019-05-10

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Description

This document defines a guide meant to be read by a final user who wants to interact with Soldino.

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1 Introduction

1.1 Document purpose

The User Manual helps the final user to accurately get a complete experience of Soldino. It describes thoroughly every single feature in this software in order to dispel any kind of doubt. This document will be updated every time a new feature becomes available.

1.2 Product purpose

The purpose of the product is the creation of a $DAPP_{\rm g}$ on the Ethereum network and available from Mozilla Firefox 9.1 and Google Chrome 71 usable with the plugin MetaMask and accessible through a UI.

Soldino expects three user types and their connected features:

• Government:

- Mint and distribute $Cubit_g$;
- Require tax payment and check status;
- Manage the business list.

• Business Owner:

- Register their business to the Government list;
- Manage their goods and services;
- Trade with citizens and other businesses;
- Manage taxes.

• Citizen:

- Trade with businesses.

1.3 References

- MetaMask: https://metamask.io/
- Google Chrome: https://www.google.com/intl/it_ALL/chrome/;
- Mozilla Firefox: https://www.mozilla.org/it/firefox/new/.

2 Getting Started

In this section will be explained all the requirements and software that you will need to have on your device in order to correctly interact with Soldino platform.

Since Soldino is hosted online you will need to have an internet connection available.

2.1 Software Requirements

To interact with Soldino you will need the MetaMask extension and a digital wallet, therefore you will need a supported browser. You can choose and download your favorite from the list below:

- Google Chrome;
- Mozilla Firefox.

To have an optimal experience, it is best if you have installed the latest version.

2.2 MetaMask

2.2.1 Install MetaMask

Installing MetaMask is very simple, go to https://metamask.io/, MetaMask will automatically detect your browser and will show you in foreground the right link you will need to follow in order to download the extension.



Figure 1: Get MetaMask extension

Follow the MetaMask instructions to correctly install the extension.

2.2.2 Create a new wallet

Once you have correctly added MetaMask to your browser you will need to create a wallet:

1. Click on "Get started" in the middle of the page;



Welcome to MetaMask

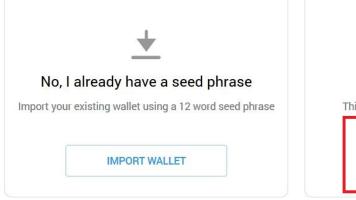
Connecting you to Ethereum and the Decentralized Web.
We're happy to see you.



Figure 2: Get started with MetaMask

2. Click on "Create a Wallet";

New to MetaMask?



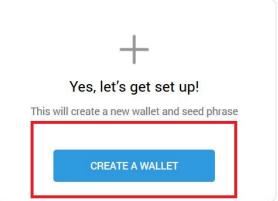


Figure 3: Create a wallet

Then follow the MetaMask instructions.

2.2.3 Log in

To log in simply click on the extension icon next to the address bar, insert the password and click "Log in".

In case you have forgot your password you can click "Import using account seed phrase" and then insert the phrase you had copied and kept in a safe place.

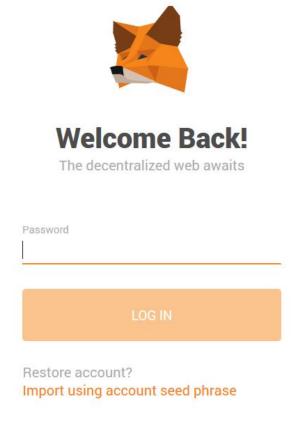


Figure 4: Log in

2.2.4 Adding token

To interact with Soldino, you will most likely need $Ether_g$: to add $tokens_g$ you have to do the following:

- 1. Click on the icon of MetaMask extension next to the address bar;
- 2. Click on the MetaMask menu icon on top left;
- 3. Click on "Add token";

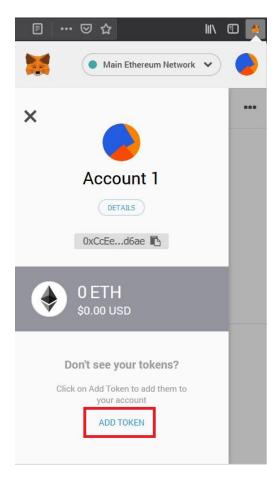


Figure 5: Add token

4. Select "Custom token";

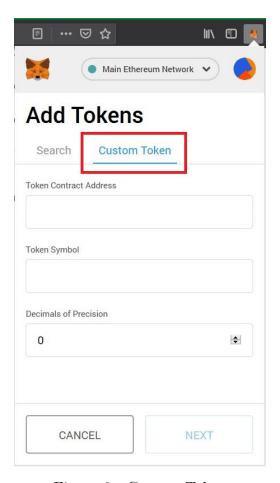


Figure 6: Custom Token

- 5. Insert in "Token Contract Address" the address for the $token_{\rm g}$ displayed in the Meta-Mask guide page inside the platform;
- 6. Fill "Token Symbol" with "ETH";
- 7. Set to 2 the decimal counter.

2.2.5 Log out

To log out you have to:

- 1. Click on the MetaMask icon placed next to the address bar;
- 2. Click on your account image;
- 3. Click on "Log out".

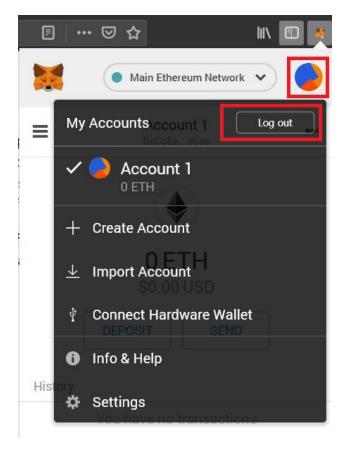


Figure 7: Log Out

3 Common pages

In this section are illustrated all the pages common among the different types of users.

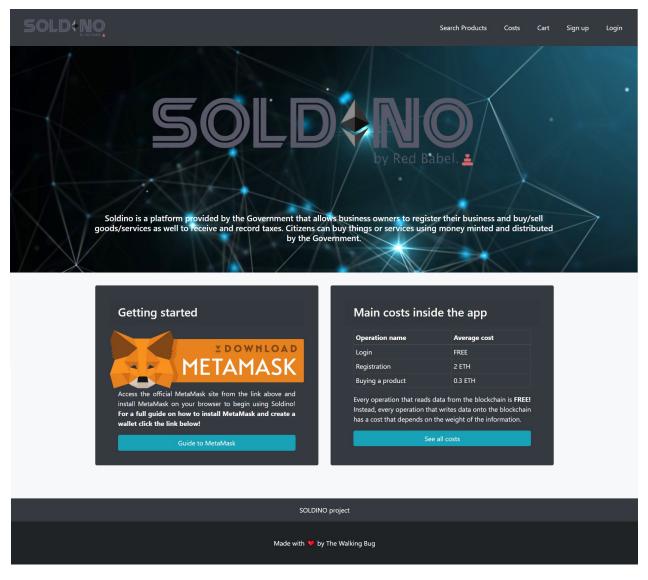


Figure 8: Homepage

3.1 Homepage

You can get back to the homepage from everywhere you are by clicking on Soldino logo on the top left corner.



Figure 9: Go back to homepage

3.2 Help page

To go to the help page you have to scroll down the homepage and click the button "Guide to MetaMask" in the section "Getting started".



Figure 10: Go back to help page

3.3 Cost page

To view all the costs you will encounter by using Soldino you can scroll down the homepage and click on the button "See all costs" in the section "Costs".

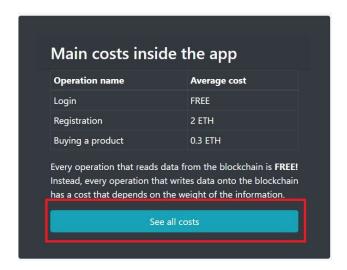


Figure 11: See costs from homepage

Otherwise you can click on "Costs" on the main menu on top right.

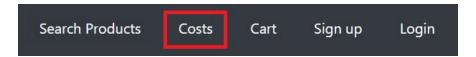


Figure 12: See costs from menu

Either way you will be redirect to the page "Price list" where you can find the costs of every action available and a currency converter ETH <=> EUR <=> USD.

3.4 Search and add products/services to cart

THIS SECTION IS REFERRING ONLY TO BUSINESS OWNERS AND CITIZENS. Since the government will not be able to search and buy goods or services, it will not need to use the search page, therefore it is not available for this type of user.

3.4.1 Search a product

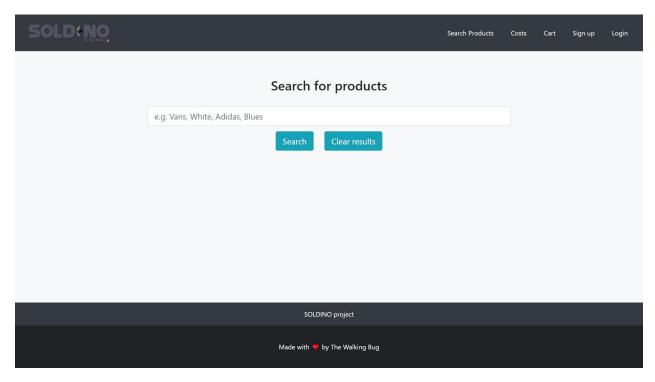


Figure 13: Search page

To look for an item sold in Soldino platform is very simple, first you must click on "Search Products" on the menu on the top right corner.

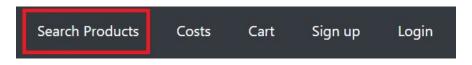


Figure 14: Search Product button

Then you can insert in the search bar the key words you want to look up for and then click on the "Search" button.

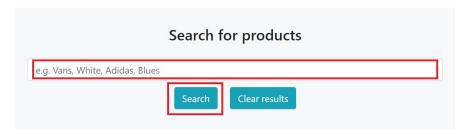


Figure 15: Start search button

Once you have launched the search, you will see the results appearing in the bottom of the page.

To clear the page from the results you just have to click on "Clear search results" under the search bar.

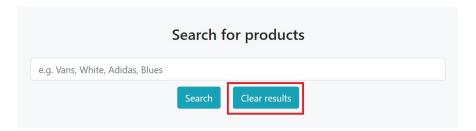


Figure 16: Clear search button

3.4.2 Add a product to the cart

Every product has its "Add to cart" button, if you want to add and item to your cart you just need to click on it.

Once you have added the good to your cart, you will be automatically redirected to the cart page where you will be able to change the quantity you would like to purchase.

WARNING: you can change the quantity of an item in the cart in any time, to do it you can proceed in two ways:

- From the page "Cart", see section 3.5;
- From the page "Product details", see section 3.4.4.

3.4.3 View product details

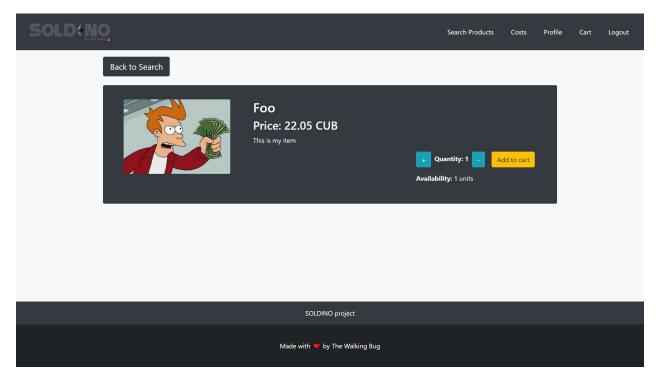


Figure 17: Product details page

You can view a more detailed description by clicking on a product: each row is clickable, therefore you do not need to click on a specific spot in order to open the detail page.

Once you will have clicked on the desired item, a new page will load and there you will see a more in depth description for the product.

Besides that, you will be able to add this item to your cart: you can choose the quantity by clicking on "+" or "-" buttons.



Figure 18: Product details quantity buttons

When you have decided the correct amount, you can click on "Add to cart" and the item will be added to your order.

WARNING: the order will not be placed by adding a voice to the cart. You can modify the quantity, or delete the item from the order on the cart page 3.5.

3.5 Cart

THIS SECTION IS REFERRING ONLY TO BUSINESS OWNERS AND CITIZENS. Since the government will not be able to search and buy goods or services, it will not need to use the cart page, therefore it is not available for this type of user.

3.5.1 View Cart page

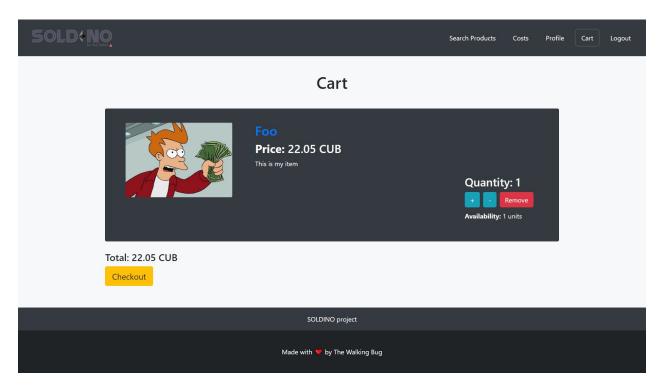


Figure 19: Cart page

To check if you have products in your cart, and eventually place the order, you have to go to the Cart page by clicking on "Cart" on the menu on the top right.



Figure 20: Cart Button

When you are on this page you will see all the items you have put in your cart, with their image, the description, the quantity you have selected and the price. At the end of the page you will also be able to see the total amount.

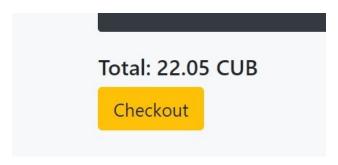


Figure 21: Total amount

3.5.2 Change the quantity

To change the quantity of an item you want to purchase, you have to click on the "+" or "-" button, which will respectively increase or decrease the quantity by one for each click.



Figure 22: Cart quantity buttons

3.5.3 Remove an item

If you want to remove an item from the cart, you have to click on the button "Remove" at the bottom right of the item.



Figure 23: Remove button

Once you have clicked, you will see that the removed item is vanished.

WARNING: once you remove an item, you cannot bring it back. In case you want to put it back in the cart you will need to do another research, find again the item and put it in the cart.

3.5.4 Checkout

Once you have checked if all the items in the cart are correct and in the right quantity, you can proceed to place the order by clicking on the "Checkout" button at the bottom.

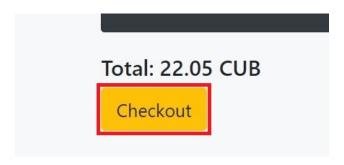


Figure 24: Checkout button

Once you have clicked on it, it will appear a MetaMask pop up in which you will have to confirm the payment.

3.6 Account management

3.6.1 Sign up

If you are a citizen or a business owner and are willing to register to Soldino you have to ensure that you are logged in to MetaMask and click on "Sign up" on the menu on the top right corner.

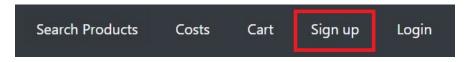


Figure 25: Sign up from menu

At this point you can choose what type of user you are and fill in the form with the information required. Then click on register and you will be redirect to your account page.

3.6.2 Login

To log in you will need to have logged in to MetaMask first and to be already registered to Soldino platform, then you will just have to click on the "Log in" button on the top right corner and you will be automatically logged in.

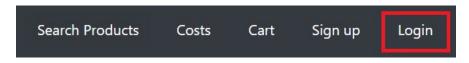


Figure 26: Login from menu

To ensure that you have logged in successfully you will be redirected to your account page.

3.6.3 Logout

To logout you just need to click logout on the top right corner. Of course you will need to be logged in to see the logout button.

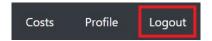


Figure 27: Logout from menu

3.7 Profile

You will be automatically redirected to your profile when you click on the "Log in" button placed on the top right corner.

From any page you can click on "Profile" on top right and you will be redirected on your profile page.

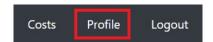


Figure 28: Profile from menu

Here you can see all your personal information and have access to all the specific actions you can do.

3.7.1 Order history

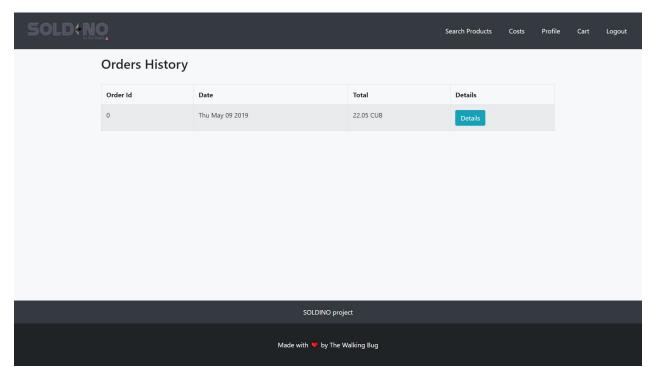


Figure 29: Order history page

A logged user can check its order history by clicking on the button "Order history" in the profile page.

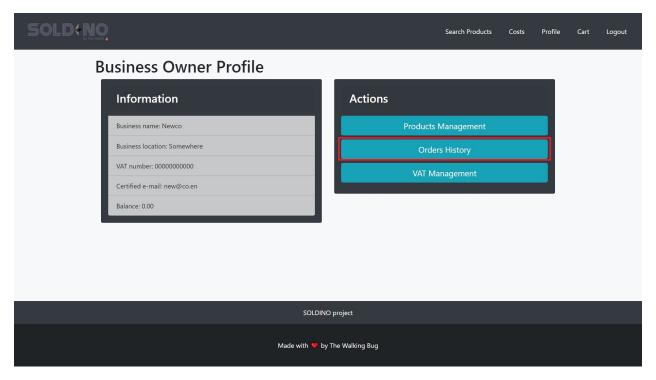


Figure 30: Order history button

On each row there are, other then the order number, the date and the total amount, two buttons:

- **Download receipt**: you can click on this if you want to download the order in pdf format;
- **Details**: you can click on this if you want to open a page in which there are the details of the order.
- **3.7.1.1** Order details On this page you will be able to see all of the item which are included in an order, the total amount, the date, the seller and the order number.

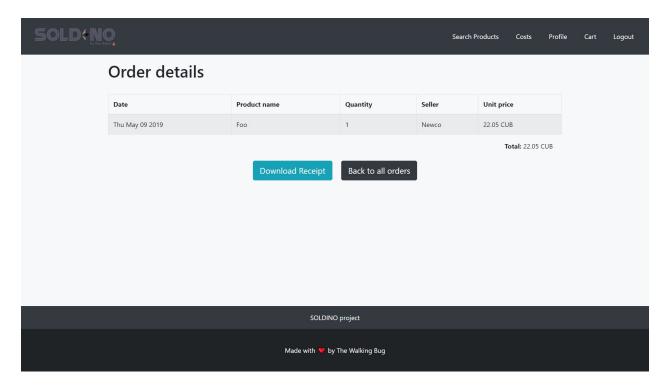


Figure 31: Order details page

You can go back to the order list by clicking on the bottom button "Back to all orders".

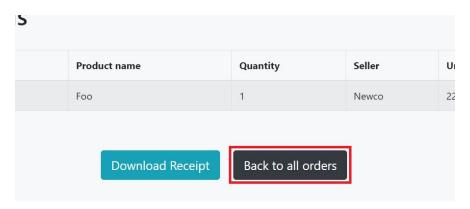


Figure 32: Back to all orders button

You can also download a pdf copy of your order by clicking on "Download Receipt" button.

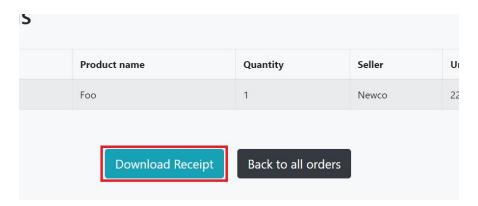


Figure 33: Download receipt button

3.7.1.2 Order history - Business owner If you are a business owner, you will be able to choose between the list of the order placed ("Purchases") and the order received ("Sales") by clicking on the desired tab.

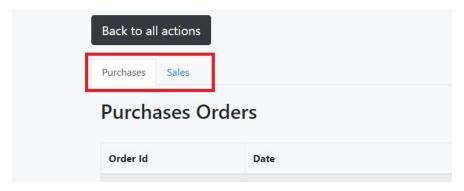


Figure 34: Tabs

3.7.2 Back to previous page

To go back to the previous page you can proceed in two ways:

- Click on the back button given by your browser;
- Use the button supplied by Soldino platform which you can find on the top left on each page which cannot be reached by the top right menu.

4 Business owner

This section will explain all the specific actions that a Business Owner user can do.

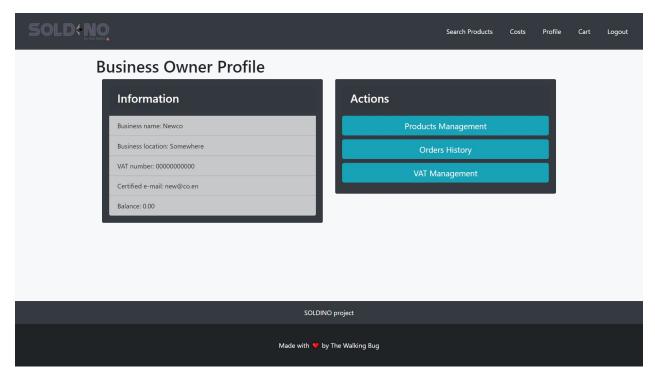


Figure 35: Business Owner profile

4.1 Profile

Here you can find all of your personal information such as business name, location, VAT number, certified e-mail and balance.

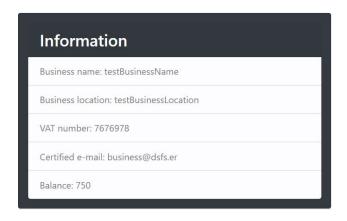


Figure 36: Business Owner information

4.2 Products management

Once you have click on "Products management" button, you will be redirected to a page where there will be listed all of your products and services available for users to buy.

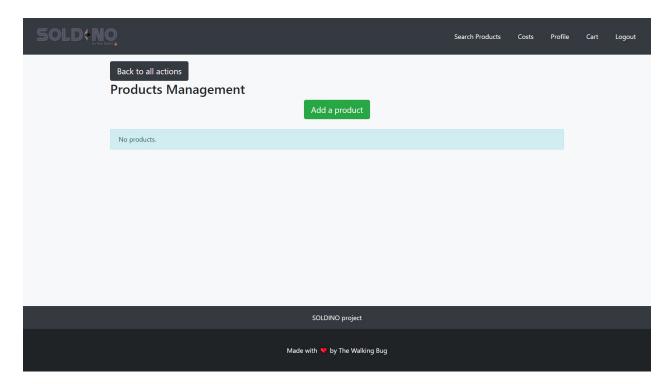


Figure 37: Product management page

Here you can add a product you want to sell or modify existing products.

4.2.1 Add a product



Figure 38: Add product button

To add a product you will need to click on the "Add a product" button and then you will be requested to fill a form with all the details.

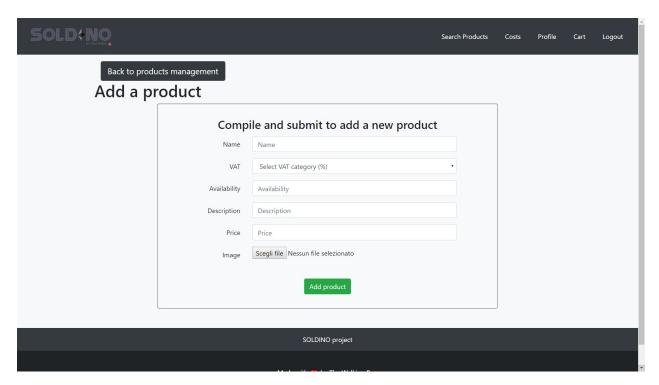


Figure 39: Insert product form

Then click on "Add product" button and a MetaMask pop up will appear, since it will cost you gas to do this action.

After the payment is confirmed in MetaMask, you will be able to see the added product on the products list.

WARNING: if you fill in the form in the wrong way, it will appear a pop up which will explain the error when you click on the submit button. You can click on ok and then you will see the form again, here you should correct the wrong field. The inserted data will not be lost.

4.2.2 Modify a product

To modify a product you will need to click on the "Modify" button on the right of the item row, then you will see a form with all the previous details that you will be able to modify.

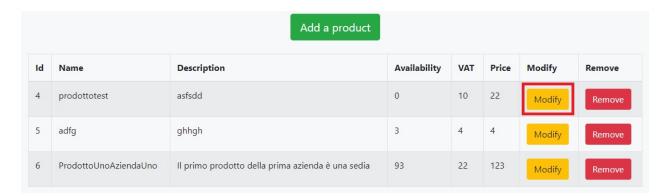


Figure 40: Modify product button

To confirm the changes you will need to click on "Modify product", then two MetaMask pop up will appear since it will cost you gas to do this action.

After you confirm the payment to MetaMask, you will be able to see the modified product on the product list.

WARNING: if you fill in the form in the wrong way,it will appear a pop up which will explain the error when you click on the submit button. You can click on ok and then you will see the form again, here you should correct the wrong field.

4.2.3 Remove a product

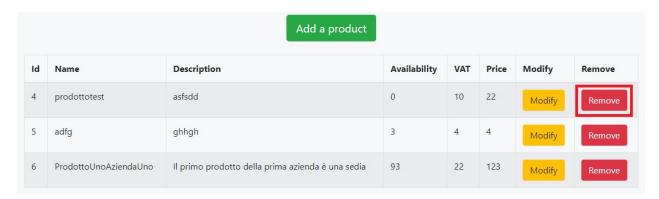


Figure 41: Remove product button

To remove a product you will need to click on the "Remove" button on the right of the item row.

A MetaMask pop up will appear since it will cost you gas to remove a product. Once you will have confirmed the payment to MetaMask, you will be able to see that the removed item will no longer appear on the list.

WARNING: once an item is removed, you will NOT be able to bring it back. You will need to add it again by following the "Add a product" action.

4.3 VAT Managment

By clicking on this button you will be redirected to the page where you will be able to manage your VAT situation.

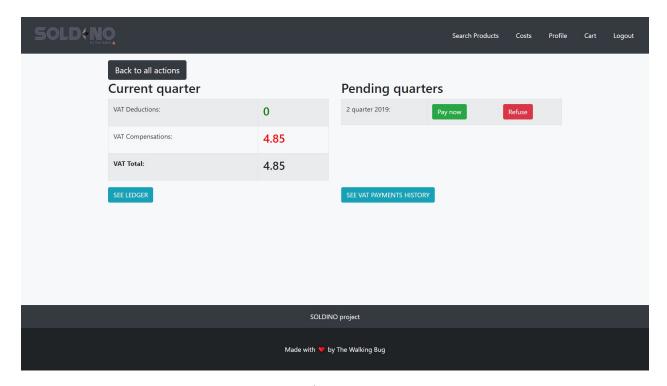


Figure 42: VAT Managment page

4.3.1 Current quarter

In this table you can see your current VAT compensation, your VAT deduction and the difference between the two in the "VAT total" row.

4.3.1.1 See ledger To have all the details you can click on the "See ledger" button.

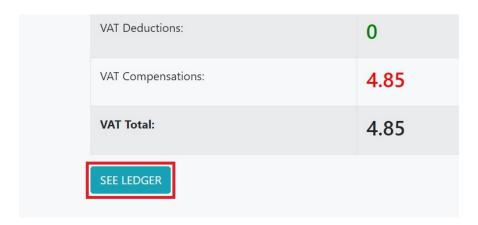


Figure 43: "See Ledger" button

Then you will be redirect to a page in which the VAT compensation and deductions are divided in quarters.

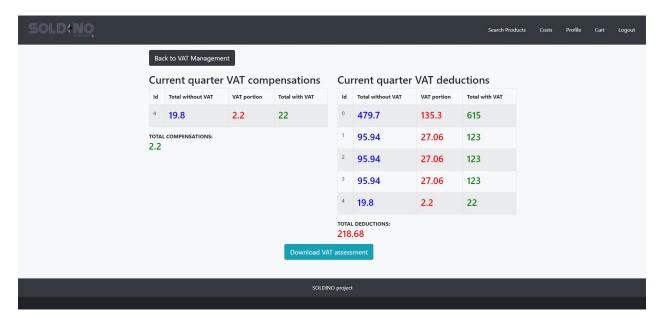


Figure 44: Ledger page

4.3.2 Pending quarters

In this section you will be able to see if there are not payed quarters, in this case there will be a button which will allow you to pay the VAT.

4.3.2.1 Pay quarter VAT To pay a quarter not settled, you will need to click on the button "Pay now".

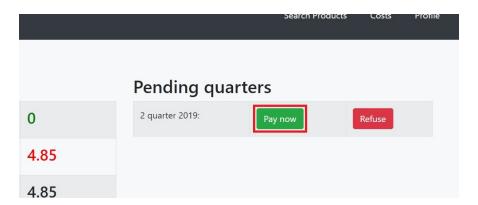


Figure 45: "Pay now" button

A MetaMask pop up will appear and you will need to confirm the transaction.

4.3.2.2 VAT payment history To see all the VAT payment history you will need to click on the button "See VAT payment history".

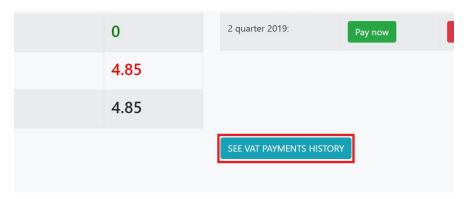


Figure 46: "See VAT payment history" button

Then you will be redirected to a page where you will see the list of the movements with all the details.

4.3.3 Other actions

The last action you can do is to check the order history, to learn how to do that you should go to section 3.7.1.

5 Citizen

This section will explain all the specific actions that a Citizen user user can do.

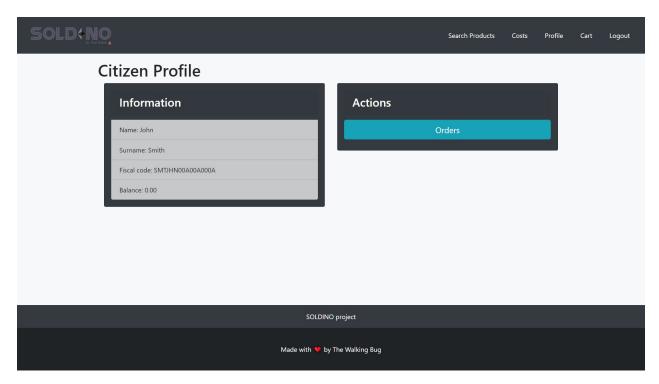


Figure 47: Citizen profile

5.1 Profile

Here you can find all of your personal information such as name, surname, social security number, e-mail and balance.

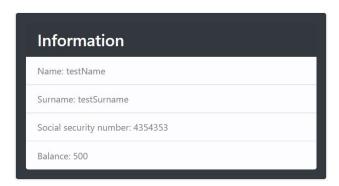


Figure 48: Citizen information

5.2 Other actions

As a citizen you can only to buy from the marketplace and view your order history. To learn how to do that you can go to sections 3.4, 3.5 and 3.7.1.

6 Government

This section will explain all the specific actions that the Government user can do.

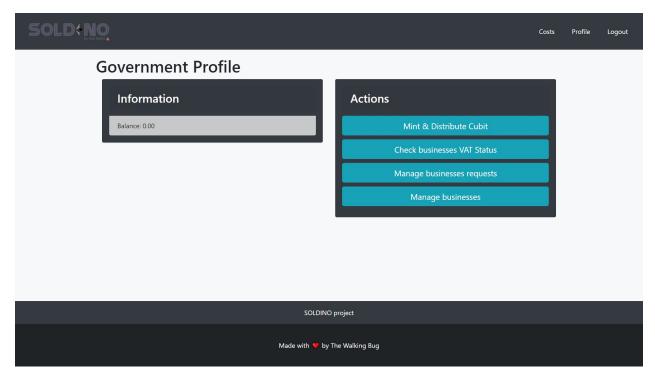


Figure 49: Governmet profile

6.1 Profile

On this page you can see the current Government balance on the left, and the list of the actions on the right.



Figure 50: Government informations

6.2 Mint & Distribute

By clicking on the button "Mint & Distribute Cubit" you will be redirected to a page where you can mint and/or distribute $Cubit_g$.



Figure 51: Mint and distribute

6.2.1 Minting Cubit

You can choose how many $Cubits_g$ you want to mint by typing the desired amount in the "Mint cubit" field, then confirm by clicking the "Mint" button.



Figure 52: Mint action

A MetaMask pop up will appear because it costs gas to mint $Cubits_g$, you will need to confirm the transaction in order to complete the action.

6.2.2 Distributing Cubit

To distribute Cubits to users you will have to do the following steps:

- Fill in the field "Amount of cubits to distribute", this amount is the one that every selected user will receive;
- Select the users you want to distribute $Cubits_g$ to by clicking on the boxes on the left of the name. Clicking on "Check all" box will check all the boxes, if there are someone you do not want to distribute $Cubits_g$ to you can uncheck it. Otherwise you can just select the ones you need.
- Click on the "Distribute" button.

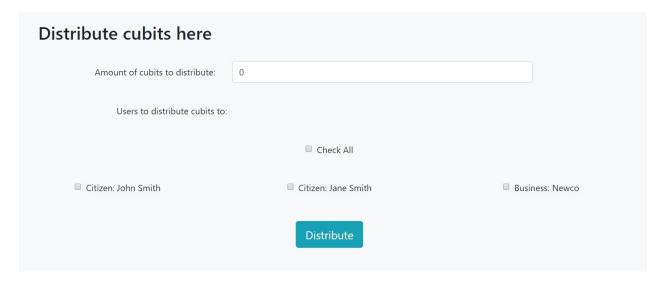


Figure 53: Distribute action

Two MetaMask pop ups will appear when you will click on the "Distribute" button: the first one is because it costs $gas+Cubits_g$ to distribute, the second one is the cost of the action. You will need to confirm both of the transaction in order to complete the action.

WARNING: once distributed $Cubits_g$ you cannot delete the action, be sure to distribute the right amount to the right users.

6.3 Check business VAT status

By clicking on this button you will see a page in which there will be listed all the registered business with their details and the action "View details" available.

When you click on this button you will be redirected on the page with all of the VAT payments of the business.

Here you will find two buttons:

• **Notify late payment**: you can click on this to notify the business that their payment is in late. Once you have clicked here it will appear a pop up to confirm that the action was successful;

• Pay VAT tax credit: you can click on this to pay the tax credit to the business. Once you have clicked it will appear a pop up to confirm that the action was successful.

If you cannot click on the buttons is because the status is regular, therefore there is no reason to notify or pay the business owner.

6.4 Manage business requests

All the business owners must be accepted by the government in order to do anything. Every time a business submits a registration, it will be listed on the page "Manage Business" accessible by the government profile.

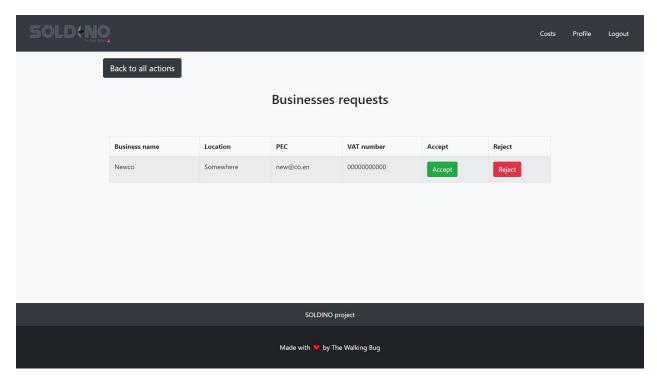


Figure 54: Manage business requests

Here the government will see the list and for each request there will be two buttons available:

- Accept: the government will have to click on this to accept the business owner request;
- Reject: the government will have to click on this to decline the business owner request.

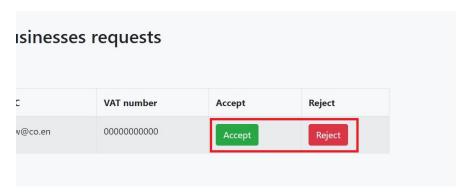


Figure 55: Accept / Reject buttons

Either action to accept or reject a request will have a MetaMask pop up appear in which you should confirm the action: adding/not accepting a business will cost you Gas.

6.5 Check and remove businesses

To view the list of all the active businesses and to remove one of them, you can click on the button "Manage business".

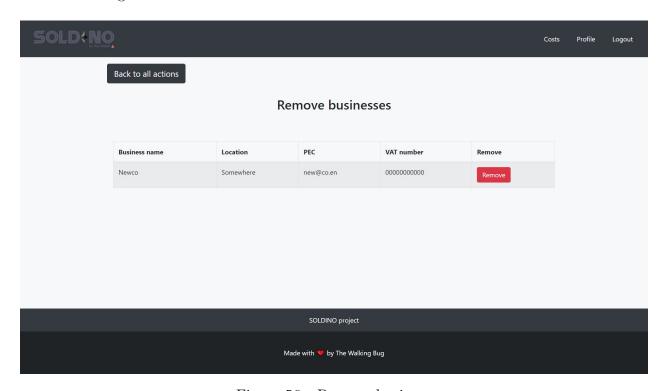


Figure 56: Remove business

Once you will have clicked on it you will be redirected to the right page and you will be able see the complete list of businesses: for each entry there will be the "Remove" button. Removing a business will cost you gas, therefore it will appear a MetaMask pop up to confirm the transaction.

WARNING: once removed a business you cannot bring it back, the business owner will have to register again and you will need to accept it back.

6.5.1 Other actions

The last action you can do is to check the order history, to learn how to do that you should go to section 3.7.1.

A Glossary

A.1 Introduction

Here you can find a glossary where there will be explained some of the terms you can find inside this document.

A.2 Words

 \mathbf{C}

Cubit

A cryptocurrency that comply with ERC-20 standards.

\mathbf{D}

DAPP

Is a decentralized application that's run on a Blockchain network. They are a type of software program designed to exist on the Internet in a way that is not controlled by any single entity.

\mathbf{E}

Ethereum

Ethereum is an open-source, public, blockchain-based distributed computing platform and operating system featuring smart contracts (scripting) functionalities.

Ether

Form of payment used by the users inside the $DAPP_{\rm g}$.

\mathbf{T}

Token

A token acts like a ticket, enabling its owner to grant access across the network.